

TEMPERATURE SENSOR AND RELATED METHODS**Abstract of the Disclosure**

A temperature sensor may include a capacitor, a circuit element coupled in series with the capacitor and having a resistance that varies with temperature, and a controller. The controller is for charging/discharging the capacitor through the circuit element, measuring a charging/discharging time required to charge/discharge the capacitor to a predetermined threshold, and determining a temperature based upon the charging/discharging time.

More specifically, the circuit element may be a thermistor, for example. The temperature sensor may further include at least one calibration resistor coupled between the controller and the capacitor. As such, the controller may sequentially charge/discharge the capacitor through the circuit element and the at least one calibration resistor, measure respective charging/discharging times required to charge/discharge the capacitor to the predetermined threshold through the circuit element and the at least one calibration resistor, and determine the temperature based upon the charging/discharging times.